



Danish National Birth Cohort

# Better Health for Mother and Child

The Danish National Birth Cohort (DNBC)



Presentation to I4C  
on 16 Nov 15  
By Sjurður F Olsen



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# Danish National Birth Cohort

101,042 women recruited while in their early pregnancies for long term follow of themselves and their offspring

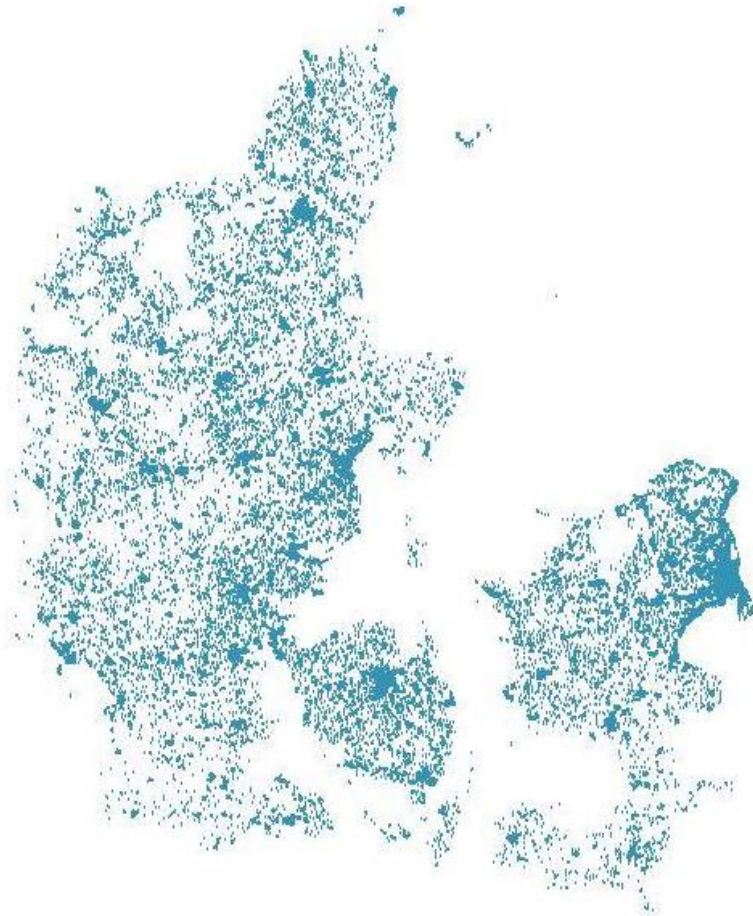
Recruited during 1996-2003

National coverage in Denmark

Around 94,000 liveborn children



## A nationwide cohort...



### Geocodes:

Each woman is represented by a dot at her address when recruited





## Initial collections

<u>Method:</u>	<u>When:</u>	<u>Description:</u>
blood sample	7-10 weeks of pregnancy	Blood from the mother taken in connection to first visit to GP
recruitment form	8-12 weeks of pregnancy	recording use of supplements and drugs
Interview	12 weeks of pregnancy	13 minutes telephone interview
questionnaire	25 weeks of pregnancy	Questionnaire on dietary habits
blood sample	24-25 weeks of pregnancy	Sample taken in connection to GP visit
Interview	30 weeks of pregnancy	12 minutes telephone interview
blood sample	Birth or fetal death	Blood from the child taken from the umbilical cord or dead fetus
Interview	Child age 6 months	16 minutes telephone interview
Interview	Child age 18 months	10 minutes telephone interview





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## Later data collections

<u>When:</u>	<u>Description:</u>
Child age 7 years	Internet Questionnaire and paper version to mother (or father)
Child age 11	Web-based questionnaire only to both mother (father) and child
11½ and every 6 months	Onset of puberty, web-based short questionnaire
Child age 14	FFQ self-administered web-based
2014	Web-based questionnaire to all mothers
Child age 18 (planned for October 2015)	Web-based questionnaire to all young participants





# Method to assess pregnancy diet

## Questionnaire in gestation week 25

### **Food frequency questions:**

- 19 A4 pages long
- Around 300 food items
- One month back in time (from gw25)
- Fixed time categories
- Fixed food item names

Also questions on food supplements

(Olsen SF et al. Paed Perin Epi 2007)

# FFQ14

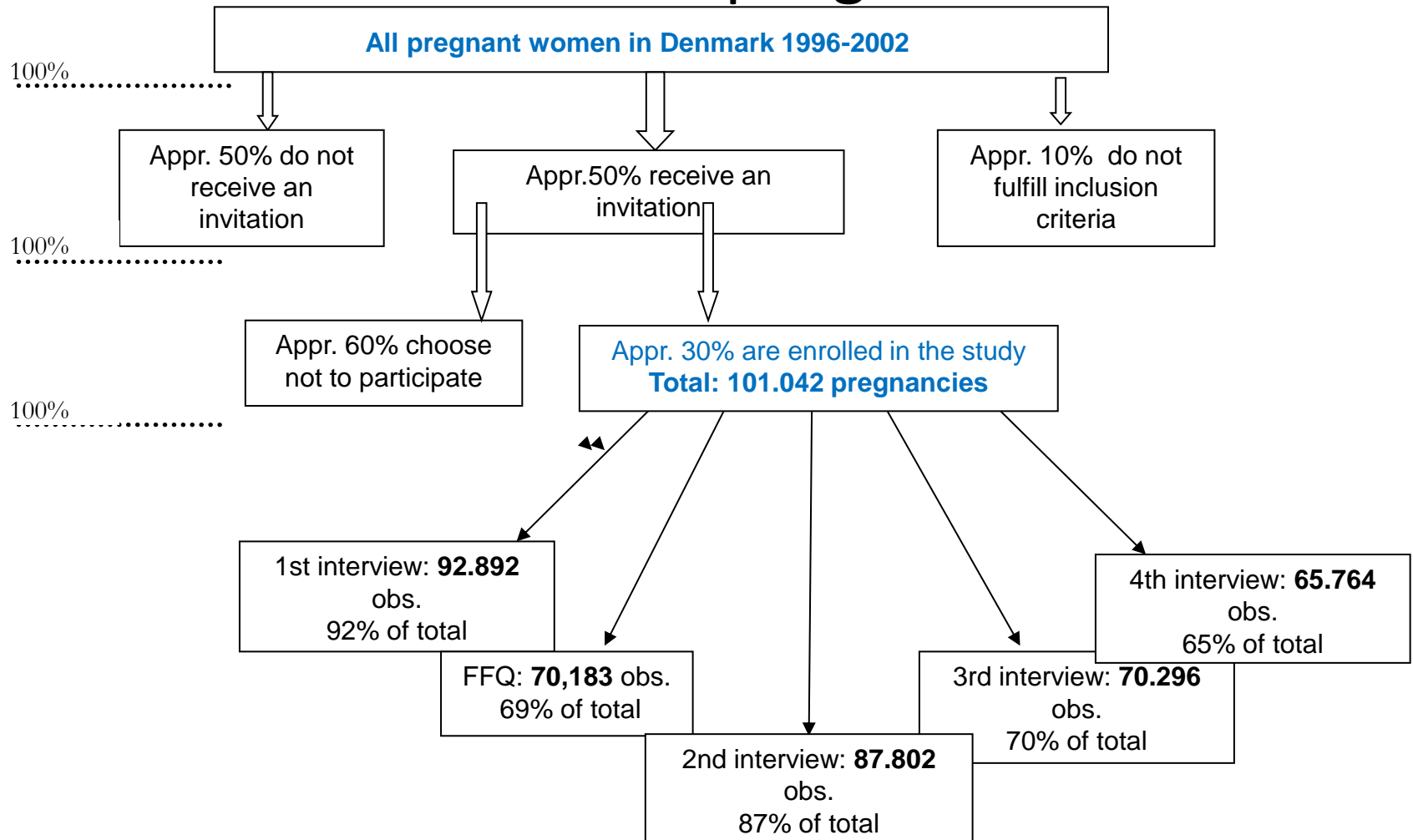
146 food items divided in to 8 food groups:

- Beverages
  - Dairy products
  - Bread and cereals
  - Spread on bread
  - Lunch and dinner meals
  - Side dishes
  - Fruit and vegetables
  - Snack and desserts
- 
- 19 questions regarding height, weight, physical activity level, meal habits, use of supplements and sleep patterns



# Danish National Birth Cohort

## Sampling



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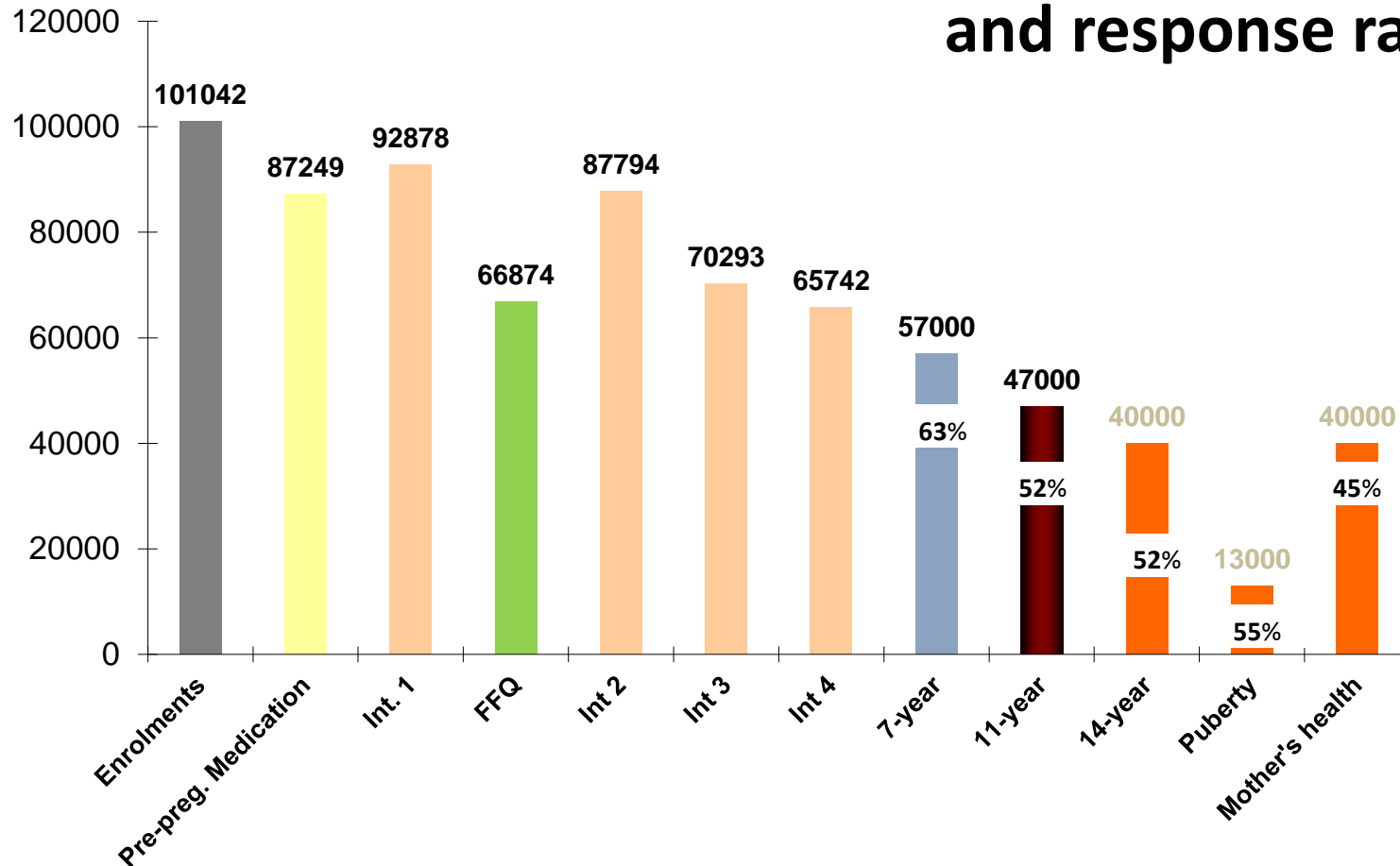


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## Data collection waves and response rates



# Danish National Birth Cohort

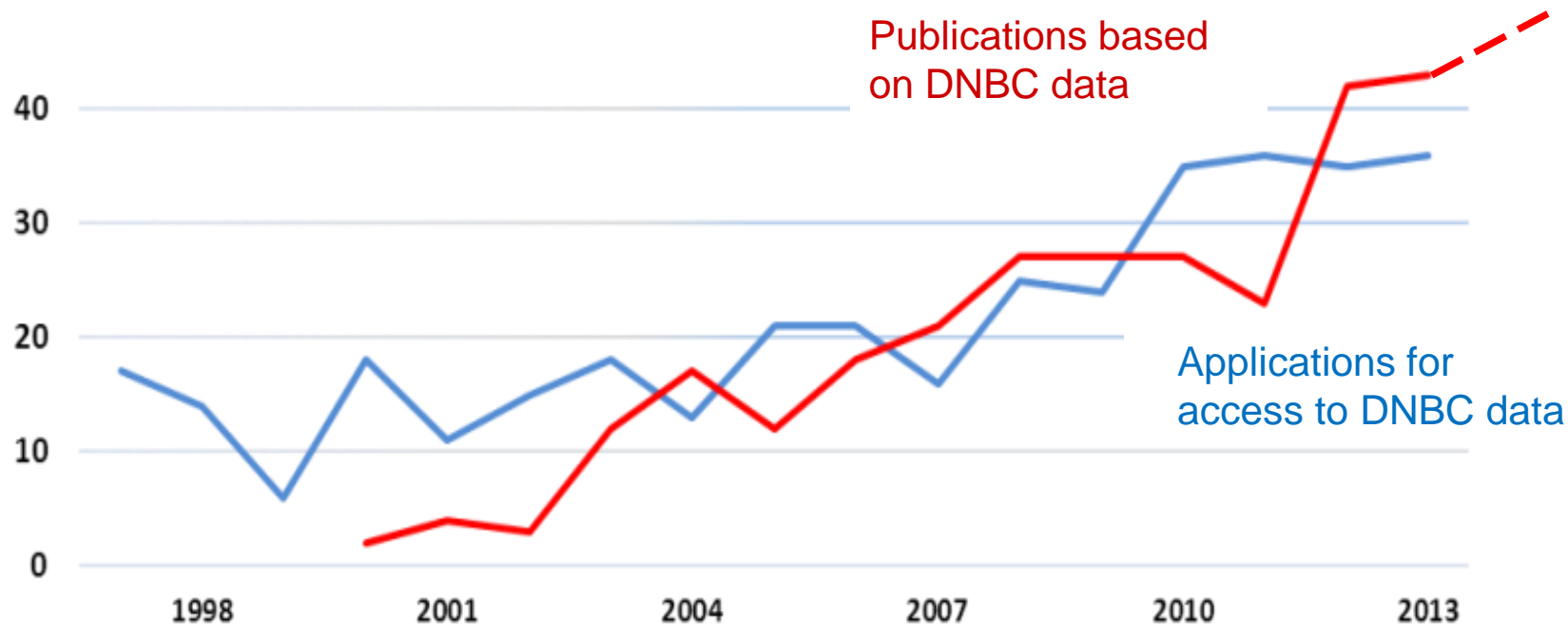
## Management Group

- Jørn Olsen (Chairman)
- Mads Melbye
- Anne M Nybo Andersen
- Ellen Aabye Nøhr
- Sjurður F Olsen
- Peter Aaby



Danish National Birth Cohort

## DNBC Publications (355 per August 2015)



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# Neoplasms

# Ascertained by 31 Dec 13

- **Total neoplasms** **204**
- **Benign** **38**
  - Brain 26
  - Other 12
- **Malignant** **166**
  - Leukemia / lymphoid 77
  - Brain 35
  - Adrenal 17
  - Other 38





# Danish National Birth Cohort

www.bsmb.dk

A website for the study was set up in 1999 and it has information about

- on-going data collections
- publications
- info for researchers

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Kontakt Om SSI Selvbetjening Sygdomsleksikon English Søg

Aktuelt Sundhedsdata og -it Smitteberedskab Diagnostik Vaccination Forskning **Produkter**

> Pubertetsundersøgelsen > 11-års undersøgelsen > Om BSMB > Til deltagerne i BSMB > Ønsker du at forske?  
> 14-års kostundersøgelse > Mødreundersøgelsen > GDM-projektet > Seneste nyt - Forskningsresultater > Publikationer fra BSMB

Forside > Bedre sundhed for mor og barn

### Pubertetsundersøgelsen

Hjælp os med at undersøge, hvorfor pubertetsalderen falder og hvad det kan betyde for sundhed senere i livet.  
[Udfyld spørgeskema her...](#)

11-års undersøgelsen i BSMB

14-års kostundersøgelse

**Pubertetsundersøgelsen**

Mødreundersøgelsen i BSMB

### Bedre sundhed for mor og barn

Kontakt BSMB

Bedre sundhed for mor og barn  
Jytte Larsen  
Inger Kristine Meder  
Tlf.: 3268 8121  
Tlf.: 3268 3957  
[bsmb@ssi.dk](mailto:bsmb@ssi.dk)  
This page in English:  
[www.dnbc.dk](http://www.dnbc.dk)

### Nyheder fra BSMB

Overvægt før graviditet hæmmer ikke barnets mentale udvikling  
22-04-2014  
Overvægtige kvinder får ikke børn med lav IQ, fordi de er...

Jobstress blandt gravide øger ikke risikoen for misdannelser, lav fødselsvægt eller for tidlig fødsel  
02-04-2014  
Forskere ved Det Nationale Forskningscenter for Arbejdsmil...

[Se alle seneste nyt fra bsmb](#)

### Club11

Vi anbefaler Firefox  
[De 11-årige udfylder skemaet i Club11 her...](#)

### 11-års undersøgelsen

Både mor (far) og den 11-årige skal udfylde hver sit skema i 11-års undersøgelsen  
[Gå til spørgeskema...](#)

### 14-års kostundersøgelse

Hyordan påvirker kosten vores helbred på længere sigt?  
[Gå til spørgeskema...](#)

### Ønsker du at forske?

Læs mere om, hvordan du søger om adgang til BSMBs data.

### Login

Her kan du logge på med dit password  
[Alle spørgeskemaer finder du her...](#)

### Pubertetsundersøgelsen

Pubertetsundersøgelsen starter ved 11½ år og omfatter BSMB-deltagere født fra 2000-2003  
[Gå til spørgeskema...](#)

### Mødreundersøgelsen

At blive mor vil for de fleste have både positive og negative konsekvenser for sundhed og trivsel.  
[Læs mere om Mødreundersøgelse](#)



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Thank you for your attention

# Description of DNBC

## Data sources

- Enrolment form (gw10)
- 4 telephone interviews (gw12, gw30, 6m, 18m)
- 3 blood samples (gw8, gw25, umbilical cord)
- Questionnaire on diet in pregnancy (gw25)
- Questionnaire to mother when child is 7y
- Questionnaire to child-mother when child is 11y
- Food Frequency Questionnaire when child is 14y

Linkages to [national registries](#) by means of a unique ID number for every citizen



## Focus areas in the pre- and post-natal questionnaires:

- Earlier pregnancies and childbirths, IVF treatment
  - Health in general and during pregnancy + medical pregnancy examinations.
  - Home and Work environment
  - Diet - vitamins - dietary supplements
  - Use of drugs, alcohol and tobacco
  - Sleep & Exercise
  - Oestrogen
  - Socio-economic variables
  - Psycho-social stress
- Child diet
  - Child development
  - Child vaccinations
  - Follow-up on pre-natal questions

